

# M40J

## HIGH MODULUS CARBON FIBER

M40J carbon fiber is an MJ-type high modulus fiber with enhanced tensile and compressive strength as compared to M series fibers. Manufactured in Japan and France.

### PRODUCT DESIGNATION

M40J	B	12,000	5	0	B
Fiber Type	Twist*	Filament Count	Sizing Type	Surface Treatment	Sizing Amount

\* B: Untwisted

### FIBER PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength	640 ksi	4,400 MPa	TY-030B-01
Tensile Modulus	54.7 Msi	377 GPa	TY-030B-01
Strain at Failure		1.2%	TY-030B-01
Density		1.77 g/cm <sup>3</sup>	TY-030B-02
Filament Diameter		5 μm	
Yield	6K	225 g/1000m	TY-030B-03
	12K	450 g/1000m	TY-030B-03

### FUNCTIONAL PROPERTIES

PROPERTY	VALUE
CTE	-0.83 α · 10 <sup>-6</sup> /°C
Specific Heat	0.723 J/g · °C
Thermal Conductivity	0.669 J/cm · s · °C
Electric Resistivity	1.0 x 10 <sup>-3</sup> Ω · cm
Chemical Composition: Carbon	>99%
Na + K	<50 ppm

### RESIN SYSTEM COMPATIBILITY

SIZING TYPE & AMOUNT	RESIN SYSTEM COMPATIBILITY	METHOD
50B (1.0%)	Epoxy, phenolic, polyester, vinyl ester	TY-030B-05

### COMPOSITE PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength*	363 ksi	2,500 MPa	ASTM D-3039
Tensile Modulus*	33 Msi	226 GPa	ASTM D-3039
Tensile Strain		1.11%	ASTM D-3039
Compressive Strength*	184 ksi	1,270 MPa	SACMASRM1R-94
Flexural Strength*	226 ksi	1,560 MPa	ASTM D-790
Flexural Modulus*	28 Msi	190 GPa	ASTM D-790
ILSS	12 ksi	83.1 MPa	SACMASRM1R-94
In Plain Shear Strength	18 ksi	123 MPa	ASTM D-3518
90° Tensile Strength	9 ksi	63 MPa	ASTM D-3039

\*Normalized to 60% fiber volume. Cured with #2592 epoxy at 130 °C.



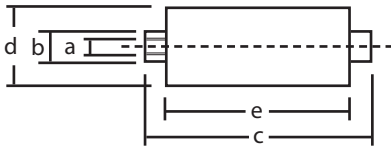
**PACKAGING**

The table below summarizes the tow sizes, twists, sizing types, and packaging available for standard material. Other bobbin sizes may be available on a limited basis.

TOW SIZES	BOBBIN NET WEIGHT (kg)	BOBBIN TYPE	BOBBIN SIZE (mm)					SPOOL PER CASE	CASE NET WEIGHT (kg)
			a	b	c	d	e		
6K	1.0	II	76	82	192	126	156	12	12
12K	2.0	II	76	82	192	157	156	12	24

**Bobbin Type:**

Type II



Please refer to SDS for handling and disposal.

**For more information or purchasing inquiries:**  
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